

Missouri Department of Natural Resources

Total Maximum Daily Load Information Sheet

Monegaw Creek

Waterbody Segment at a Glance:

County: St. Clair
Nearby Cities: Appleton City and Monegaw Springs
Length of impairment: 3 miles
Pollutant: Sulfate
Source: Montee Abandoned Mine Lands (AML)



State map showing location of watershed

TMDL Priority Ranking: Low

Description of the Problem

Beneficial uses of Monegaw Creek

- Livestock and Wildlife Watering
- Protection of Warm Water Aquatic Life and Human Health associated with Fish Consumption
- Boating and Canoeing

Use that is impaired

- Protection of Warm Water Aquatic Life

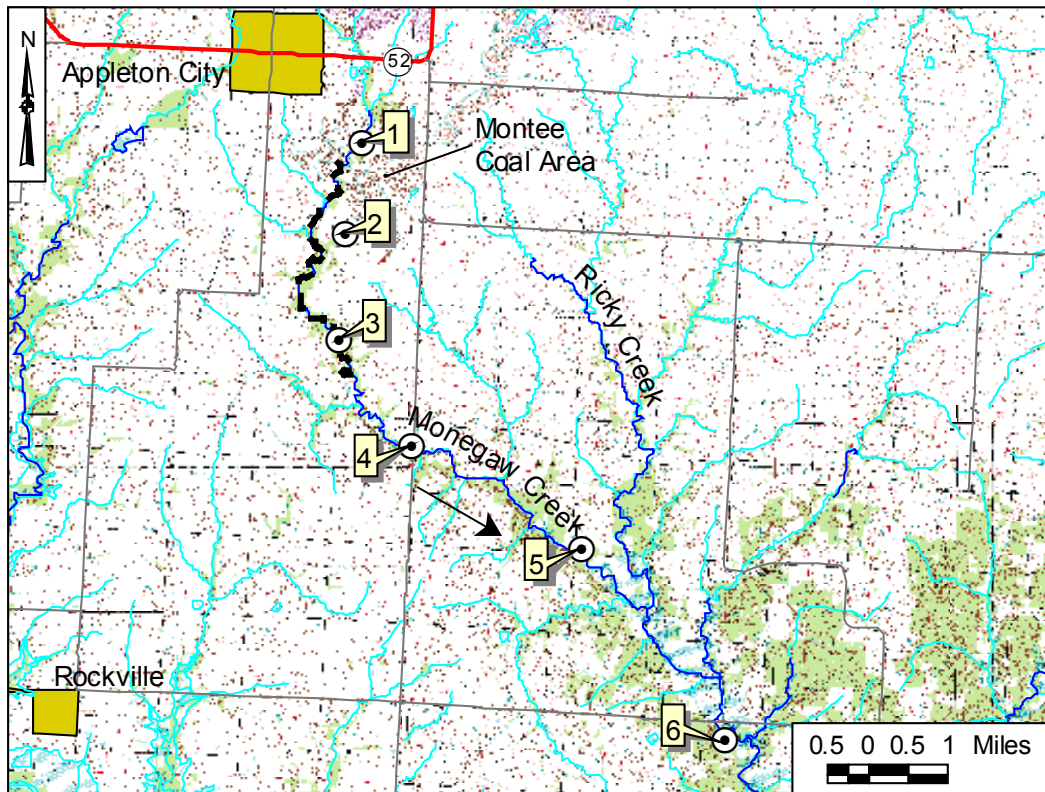
Standards that apply

- Missouri Water Quality Standards found in 10 CSR 20-7.031 (4)(L) state:
The concentration of chloride plus sulfate shall not exceed one thousand milligrams per liter (mg/L or parts per million) for protection of aquatic life.

Monitoring of the specific conductivity (amount of dissolved substances) in Monegaw Creek near Appleton City indicated the stream had high levels of sulfate, which are harmful to aquatic life. For that reason, Monegaw Creek was placed on the 303(d) Impaired Waters List and monitoring of the stream for sulfate and chloride began in 2000. The Montee Abandoned Mine Lands around Monegaw Creek are the source of the sulfate. Sulfide (containing sulfur) minerals, common in coal and the surrounding rock, oxidize in the presence of water and oxygen to form highly acidic, iron- and sulfate-rich drainage. The sulfate produced by this weathering may persist in water for a long time.

To date, two sets of data are available for several locations on Monegaw Creek. These data show sulfate plus chloride levels of 522 – 936 mg/L in the section of stream on the 303(d) list. Additional annual monitoring is planned. Graphs summarizing the data and a map of the area with sampling sites may be found below.

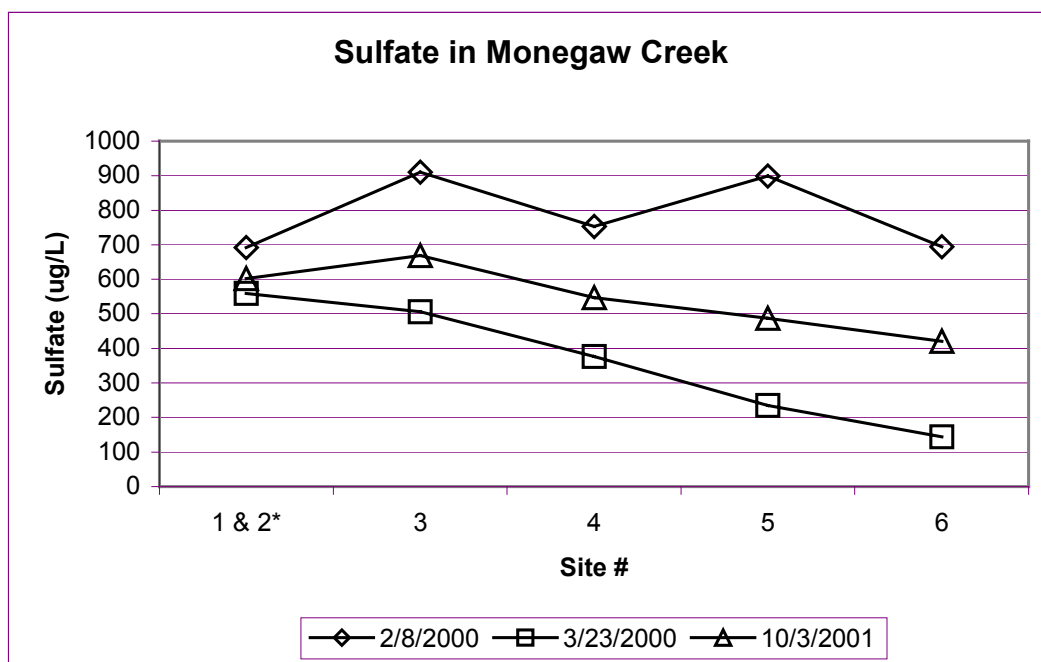
Monegaw Creek in St. Clair County, Missouri, with Sampling Sites



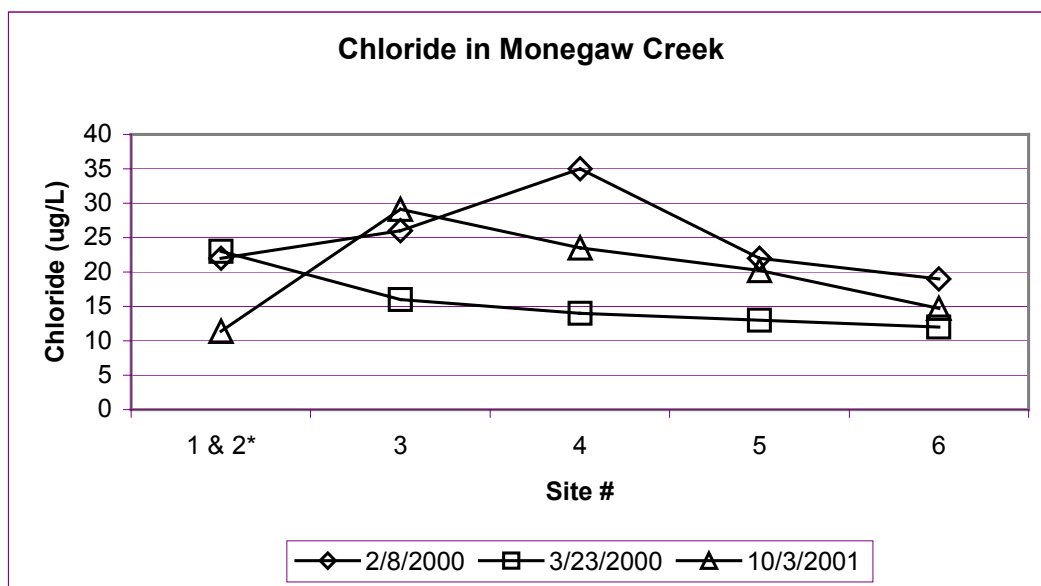
— — — — ▪ Impaired Segment —————> Direction of Flow

Site Index

- 1 – Monegaw Creek 1 mile below Appleton City
- 2 – Tributary to Monegaw Creek
- 3 – Monegaw Creek 4 miles below Appleton City
- 4 – Monegaw Creek 6 miles below Appleton City at Highway H
- 5 – Monegaw Creek 8 miles below Appleton City
- 6 – Monegaw Creek 11 miles below Appleton City at Highway B



*Site #1 sampled on 2/8/2000 and 3/23/2000; Site #2 sampled on 10/3/2001
 Source: Missouri Department of Natural Resources



*Site #1 sampled on 2/8/2000 and 3/23/2000; Site #2 sampled on 10/3/2001
 Source: Missouri Department of Natural Resources

For more information call or write:

Missouri Department of Natural Resources

Water Pollution Control Program

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